Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) An implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib within a patient, the implantable cardioverter-defibrillator comprising:

a housing having a distal section and a proximal section, a top exterior surface, a proximal end and a distal end, wherein the top exterior surface along the distal section is contiguous with the top exterior surface along the proximal section, wherein the housing is substantially bilaterally symmetrical along a length of the housing's top exterior surface, wherein a width of the housing's top exterior surface at the distal section of the housing is less than a width of the top exterior surface at the proximal section of the housing, the width of the housing tapering from the proximal section to the distal section;

an electrical circuit located within the housing; and

an electrode electrically coupled to the electrical circuit and located on the housing; wherein the electrical circuit provides cardioversion-defibrillation energy to the patient's heart.

2. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the distal end of the housing is rounded.

3. (withdrawn) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the proximal end of the housing is substantially square.

4. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the proximal end of the housing is rounded.

5. (original) The implantable cardioverter-defibrillator of claim 1, wherein the width of the proximal end of the housing is approximately 1 centimeter to approximately 10 centimeters wide.

6. (original) The implantable cardioverter-defibrillator of claim 1, wherein the width of the proximal end of the housing is approximately 2 centimeters to approximately 5 centimeters wide.

7. (original) The implantable cardioverter-defibrillator of claim 1, wherein the width of the distal end of the housing is approximately 1 centimeter to approximately 10 centimeters wide.

8. (original) The implantable cardioverter-defibrillator of claim 1, wherein the width of the distal end of the housing is approximately 2 centimeters to approximately 5 centimeters wide.

9. (original) The implantable cardioverter-defibrillator of claim 1, wherein the proximal end of the housing further comprises a depth, wherein the depth of the proximal end of the housing is less than approximately 15 millimeters.

10. (original) The implantable cardioverter-defibrillator of claim 1, wherein the distal end of the housing further comprises a depth, wherein the depth of the distal end of the housing is approximately 1 millimeter to approximately 15 millimeters.

11. (previously presented) The implantable cardioverter-defibrillator of claim 1, wherein the distal end of the housing further comprises a depth, wherein the depth of the distal end of the housing is approximately 1 millimeter to approximately 3 millimeters.

12. (original) The implantable cardioverter-defibrillator of claim 1, wherein the housing further comprises a length, wherein the length of the housing is approximately 3 centimeters to approximately 30 centimeters long.

13. (original) The implantable cardioverter-defibrillator of claim 1, wherein the housing further comprises a length, wherein the length of the housing is approximately 5 centimeters to approximately 20 centimeters long.

14. (canceled)

15. (original) The implantable cardioverter-defibrillator of claim 1, wherein the proximal end of the housing is hinged to the distal end of the housing.

16. (original) The implantable cardioverter-defibrillator of claim 1, wherein the proximal end of the housing is contiguous with the distal end of the housing.

17. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the housing comprises an electrically insulated material.

18. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the housing comprises an electrically nonconductive material.

19. (original) The implantable cardioverter-defibrillator of claim 1, wherein the housing comprises a ceramic material.

20. (original) The implantable cardioverter-defibrillator of claim 1, wherein the housing comprises a titanium alloy.

21. (original) The implantable cardioverter-defibrillator of claim 1, wherein the housing comprises a polymeric material.

22. (original) The implantable cardioverter-defibrillator of claim 21, wherein the polymeric material is selected from the group consisting essentially of a polyurethane, a polyamide, a polyetheretherketone (PEEK), a polyether block amide (PEBA), a polytetrafluoroethylene (PTFE), a silicone, and mixtures thereof.

23. (previously presented) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the housing is substantially non planar.

24. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the housing is substantially planar.

25. (canceled)

26. (currently amended) The implantable cardioverter-defibrillator of claim [[25]] 1 wherein the electrical circuit can further provide multiphasic waveform cardiac pacing for the patient's heart.

27. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrical circuit can provide multiphasic waveform cardiac pacing for the patient's heart.

28. (original) The implantable cardioverter-defibrillator of claim 27, wherein the electrical circuit can provide biphasic waveform cardiac pacing for the patient's heart.

29. (original) The implantable cardioverter-defibrillator of claim 27, wherein the electrical circuit can provide triphasic waveform cardiac pacing for the patient's heart.

30. (original) The implantable cardioverter-defibrillator of claim 27, wherein the electrical circuit can further provide monophasic waveform cardiac pacing for the patient's heart.

31. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode can emit an energy for shocking the patient's heart.

32. (original) The implantable cardioverter-defibrillator of claim 31, wherein the energy for shocking the patient's heart is approximately 50 joules to approximately 75 joules.

33. (original) The implantable cardioverter-defibrillator of claim 31, wherein the energy for shocking the patient's heart is approximately 75 joules to approximately 100 joules.

34. (original) The implantable cardioverter-defibrillator of claim 31, wherein the energy for shocking the patient's heart is approximately 100 joules to approximately 125 joules.

35. (original) The implantable cardioverter-defibrillator of claim 31, wherein the energy for shocking the patient's heart is approximately 125 joules to approximately 150 joules.

36. (original) The implantable cardioverter-defibrillator of claim 35, wherein the energy for shocking the patient's heart is approximately 150 J.

37. (original) The implantable cardioverter-defibrillator of claim 31, wherein the electrode can receive sensory information.

38. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode can receive sensory information.

39. (original) The implantable cardioverter-defibrillator of claim 1, wherein at least a portion of the electrode is non-planar.

40. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially circular in shape.

41. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially ellipsoidal in shape.

42. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially square in shape.

43. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially rectangular in shape.

44. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially triangular in shape.

45. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially thumbnail shaped.

46. (original) The implantable cardioverter-defibrillator of claim 1, wherein the electrode is substantially spade shaped.

47-51. (canceled)

52. (currently amended) An implantable cardioverter-defibrillator comprising:

a main housing section having an exterior surface and a width;

a distal housing section extending distally from the main housing section, wherein the distal housing section has an exterior surface that is contiguous with the exterior surface of the main housing section, and further wherein the distal housing section has a width less than the width of the main housing section;

an electrical circuit located within the main housing section; and

an electrode electrically coupled to the electrical circuit and located on the distal housing section; wherein the electrical circuit provides cardioversion-defibrillation energy to the patient's heart.

53. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the length of the implantable cardioverter-defibrillator is approximately 5 centimeters to approximately 20 centimeters long.

54. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the length of the implantable cardioverter-defibrillator is less than 30 centimeters long.

55. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the implantable cardioverter-defibrillator is substantially bilaterally symmetrical along the cardioverter-defibrillator's length.

56. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the distal housing section and the main housing section are made of the same material.

57. (canceled)

58. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the distal housing section is hinged to the main housing section.

59. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the distal housing section further includes a distal end, wherein at least a portion of the distal end of the distal housing section is curved.

60. (withdrawn) The duckbill-shaped implantable cardioverter-defibrillator of claim 52, wherein the main housing member further includes a proximal end, wherein at least a portion of the proximal end of the main housing member is substantially square.

61. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section further includes a proximal end, wherein at least a portion of the proximal end of the main housing section is rounded.

62. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the width of the main housing section is approximately 3 centimeters to approximately 30 centimeters wide.

63. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section is approximately 3 centimeters to approximately 20 centimeters wide.

64. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the distal housing section further comprises a shoulder region, wherein the shoulder region extends distally from the main housing section.

65. (previously presented) The implantable cardioverter-defibrillator of claim 64, wherein the shoulder region of the distal housing section has a width that is less than the width of the main housing section.

66. (previously presented) The implantable cardioverter-defibrillator of claim 65, wherein at least a portion of the width of the shoulder region decreases as the shoulder region extends distally from the main housing section.

67. (previously presented) The implantable cardioverter-defibrillator of claim 66, wherein the width of the shoulder region decreases proportionally as the shoulder region extends distally from the main housing section.

68. (previously presented) The implantable cardioverter-defibrillator of claim 64, wherein the distal housing section further comprises a distal head, wherein the distal head extends distally from the shoulder region and defines a distal end of the distal housing section.

69. (previously presented) The implantable cardioverter-defibrillator of claim 68, wherein the distal head of the distal housing section has a width that is less than the width of the shoulder region of the distal housing section.

70. (previously presented) The implantable cardioverter-defibrillator of claim 68, wherein the distal head of the distal housing section has a width that is greater than the width of the shoulder region of the distal housing section.

71. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the depth of the distal housing section is less than the depth of the main housing section.

72. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the depth of the distal housing section is less than approximately 15 millimeters.

73. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the depth of the main housing section is approximately 1 millimeter to approximately 15 millimeters.

74. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the depth of the main housing section is approximately 1 millimeter to approximately 10 millimeters.

75. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the distal housing section is substantially non-planar.

76. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the main housing section is substantially planar.

77. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the main housing section is substantially non-planar.

78. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the distal housing section is bilaterally symmetrical along its length.

79. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the distal housing section comprises an electrically insulated material.

80. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the distal housing section comprises an electrically nonconductive material.

81. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section comprises a ceramic material.

82. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section comprises a titanium alloy.

83. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section comprises a stainless steel alloy.

84. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the main housing section comprises a polymeric material.

85. (previously presented) The implantable cardioverter-defibrillator of claim 84, wherein the polymeric material is selected from the group consisting essentially of a polyurethane, a polyamide, a polyetheretherketone (PEEK), a polyether block amide (PEBA), a polytetrafluoroethylene (PTFE), a silicone, and mixtures thereof.

86. (cancelled)

87. (currently amended) The implantable cardioverter-defibrillator of claim [[86]] 52, wherein the electrical circuit can provide multiphasic waveform cardiac pacing for the patient's heart.

88. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrical circuit can provide multiphasic waveform cardiac pacing for the patient's heart.

89. (previously presented) The implantable cardioverter-defibrillator of claim 88, wherein the electrical circuit can provide biphasic waveform cardiac pacing for the patient's heart.

90. (previously presented) The implantable cardioverter-defibrillator of claim 88, wherein the electrical circuit can provide triphasic waveform cardiac pacing for the patient's heart.

91. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electric circuit can provide monophasic waveform cardiac pacing for the patient's heart.

92. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode can emit an energy for shocking the patient's heart.

93. (previously presented) The implantable cardioverter-defibrillator of claim 92, wherein the energy for shocking the patient's heart is approximately 50 joules to approximately 75 joules.

94. (previously presented) The implantable cardioverter-defibrillator of claim 92, wherein the energy for shocking the patient's heart is approximately 75 joules to approximately 100 joules.

95. (previously presented) The implantable cardioverter-defibrillator of claim 92, wherein the energy for shocking the patient's heart is approximately 100 joules to approximately 125 joules.

96. (previously presented) The implantable cardioverter-defibrillator of claim 92, wherein the energy for shocking the patient's heart is approximately 125 joules to approximately 150 joules.

97. (previously presented) The implantable cardioverter-defibrillator of claim 96, wherein the energy for shocking the patient's heart is approximately 150 J.

98. (previously presented) The implantable cardioverter-defibrillator of claim 92, wherein the electrode can receive sensory information.

99. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode can receive sensory information.

100. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein at least a portion of the electrode is non-planar.

101. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially circular in shape.

102. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially ellipsoidal in shape.

103. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially square in shape.

104. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially rectangular in shape.

105. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially triangular in shape.

106. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially thumbnail shaped.

107. (previously presented) The implantable cardioverter-defibrillator of claim 52, wherein the electrode is substantially spade shaped.

108-112. (cancelled)

113. (previously presented) A method of inserting an implantable cardioverter-defibrillator within a patient, the method comprising the steps of:

providing a cardioverter-defibrillator comprising a unitary housing, an electrical circuit located within the housing, and an electrode located on the housing, wherein the unitary housing has an exterior surface that is tapered from a first width at a proximal end to a second, smaller width at a distal end, wherein the cardioverter-defibrillator is configured to maintain the electrode in a predetermined relationship subcutaneously over a patient's ribcage;

making an incision on a patient's thorax; and

advancing the cardioverter-defibrillator through the incision and subcutaneously over a patient's ribcage, wherein the cardioverter-defibrillator is advanced approximately between a patient's third and a patient's twelfth rib.

114. (cancelled)

115. (previously presented) The method of claim 113, wherein at least a portion of the distal end of the housing is rounded.

116. (withdrawn) The method of claim 114, wherein at least a portion of the proximal end of the housing is substantially square.

117. (previously presented) The method of claim 113, wherein at least a portion of the proximal end of the housing is rounded.

118. (previously presented) The method of claim 113, wherein the width of the proximal end of the housing is approximately 1 centimeter to approximately 10 centimeters wide.

119. (previously presented) The method of claim 113, wherein the width of the proximal end of the housing is approximately 2 centimeters to approximately 5 centimeters wide.

120. (previously presented) The method of claim 113, wherein the width of the distal end of the housing is approximately 1 centimeter to approximately 10 centimeters wide.

121. (previously presented) The method of claim 113, wherein the width of the distal end of the housing is approximately 2 centimeters to approximately 5 centimeters wide.

122. (previously presented) The method of claim 113, wherein the proximal end of the housing further comprises a depth, wherein the depth of the proximal end of the housing is less than approximately 15 millimeters.

123. (previously presented) The method of claim 113, wherein the distal end of the housing further comprises a depth, wherein the depth of the distal end of the housing is approximately 1 millimeter to approximately 15 millimeters.

124. (previously presented) The method of claim 113, wherein the distal end of the housing further comprises a depth, wherein the depth of the distal end of the housing is approximately 1 millimeter to approximately 3 millimeters.

125. (original) The method of claim 113, wherein the housing further comprises a length, wherein the length of the housing is approximately 3 centimeters to approximately 30 centimeters long.

126. (original) The method of claim 113, wherein the housing further comprises a length, wherein the length of the housing is approximately 5 centimeters to approximately 20 centimeters long.

127. (original) The method of claim 113, wherein the housing is substantially bilaterally symmetrical along the housing's length.

128. (previously presented) The method of claim 113, wherein the proximal end of the housing is contiguous with the distal end of the housing.

129. (original) The method of claim 113, wherein at least a portion of the housing comprises an electrically insulated material.

130. (original) The method of claim 113, wherein at least a portion of the housing comprises an electrically nonconductive material.

131. (original) The method of claim 113, wherein the housing is substantially non planar.

132. (original) The method of claim 113, wherein the housing is substantially planar.

133. (currently amended) The method of claim [[133]] 113, wherein the electrical circuit can provide cardioversion-defibrillation for the patient's heart.

134. (original) The method of claim 133, wherein the electrical circuit can further provide multiphasic waveform cardiac pacing for the patient's heart.

135. (original) The method of claim 113, wherein the electrical circuit can provide multiphasic waveform cardiac pacing for the patient's heart.

136. (original) The method of claim 135, wherein the electrical circuit can provide biphasic waveform cardiac pacing for the patient's heart.

137. (original) The method of claim 135, wherein the electrical circuit can provide triphasic waveform cardiac pacing for the patient's heart.

138. (original) The method of claim 113, wherein the electrical circuit can provide monophasic waveform cardiac pacing for the patient's heart.

139. (original) The method of claim 113, wherein the electrode can emit an energy for shocking the patient's heart.

140. (original) The method of claim 139, wherein the electrode can receive sensory information.

141. (original) The method of claim 113, wherein the electrode can receive sensory information.

142. (original) The method of claim 113, wherein at least a portion of the electrode is non-planar.

143. (previously presented) A method of inserting an implantable cardioverter-defibrillator within a patient, the method comprising the steps of:

providing a cardioverter-defibrillator comprising a housing, an electrical circuit located within the housing, and an electrode located on the housing, wherein the cardioverter-defibrillator is configured to maintain the electrode in a predetermined relationship subcutaneously over a patient's ribcage;

making a single incision on a patient's thorax, wherein the single incision is made approximately at the level of the cardiac apex; and

advancing the cardioverter-defibrillator through the single incision and subcutaneously over a patient's ribcage, wherein the cardioverter-defibrillator is advanced approximately between a patient's third and a patient's twelfth rib.

144. (previously presented) A method of inserting an implantable cardioverter-defibrillator within a patient, the method comprising the steps of:

providing a cardioverter-defibrillator comprising a housing, an electrical circuit located within the housing, and an electrode located on the housing, wherein the cardioverter-defibrillator is configured to maintain the electrode in a predetermined relationship subcutaneously over a patient's ribcage;

making a single incision on a patient's thorax, wherein the single incision is made approximately in the left anterior axillary line; and

advancing the cardioverter-defibrillator through the single incision and subcutaneously over a patient's ribcage, wherein the cardioverter-defibrillator is advanced approximately between a patient's third and a patient's twelfth rib.

145. (previously presented) The method of claim 113, wherein the cardioverter-defibrillator is advanced proximate the patient's heart.

146. (previously presented) A method of inserting an implantable cardioverter-defibrillator within a patient, the method comprising the steps of:

providing a cardioverter-defibrillator comprising a housing, an electrical circuit located within the housing, and an electrode located on the housing, wherein the cardioverter-defibrillator is configured to maintain the electrode in a predetermined relationship subcutaneously over a patient's ribcage;

making a single incision on a patient's thorax; and

advancing the cardioverter-defibrillator through the single incision and subcutaneously over a patient's ribcage, wherein the cardioverter-defibrillator is advanced approximately between a patient's third and a patient's twelfth rib, wherein the cardioverter-defibrillator is advanced medially toward approximately a patient's left inframammary crease.

147. (previously presented) The method of claim 113, wherein the cardioverter-defibrillator is advanced proximate a patient's sternum.

148. (cancelled)

149. (previously presented) The method of claim 113, wherein the cardioverter-defibrillator refrains from directly contacting the patient's heart.

150. (previously presented) The method of claim 113, wherein the cardioverter-defibrillator refrains from directly contacting the patient's intrathoracic vessels.